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10/681,621	10/07/2003	Julius O. Smith III	JOS-101/DIV	7394

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EXAMINER
LU, KUEN S

ART UNIT	PAPER NUMBER
2167	

DATE MAILED: 04/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/681,621	SMITH, JULIUS O.
	Examiner	**Art Unit**
	Kuen S. Lu	2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-59* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *07 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *10/7/2003*.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The Action is responsive to Applicant's Application, filed October 7, 2003.

Priority

2. This application appears to be a division of Application No. 09/412,248, filed October 5, 1999. A later application for a distinct or independent invention, carved out of a pending application and disclosing and claiming only subject matter disclosed in an earlier or parent application is known as a divisional application or "division." The divisional application should set forth the portion of the earlier disclosure that is germane to the invention as claimed in the divisional application. Concerning application 09/412,248, Applicant's claim for the benefit of a prior-filed application, 60/103,089, filed October 5, 1998 under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged.

Information Disclosure Statement

3. The Information Disclosure Statement filed October 7, 2003 has been considered as signed PTO-1449 attached.

Drawings

4. The drawings filed October 7, 2003 have been accepted.

Specification

5. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code, or to modify the hyperlink or code into un-linkable or un-executable format. See MPEP § 608.01. Examples of place of hyperlink's appearance are Page 3, lines 16 and 27; Page 4, lines 19 and 24; Page 10, lines 17, 20 and 23; Page 27, line 14; Page 28, lines 8 and 14; Page 39, lines 10 and 13; Pages 41-42; and Page 65, lines 12, 15 and 25. Appropriate correction is required.

Claim Objections

6. Claim 1 is objected to because of the following informalities: In limitation a) of each claim where "database means containing..." seems to be a typographical error of "database means for containing ...". The same error seem to occur in claims 44 and 57. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 45, 47 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. For example, in claim 45, the elements, "submitting a set of submitted" and "selecting a set of selected" are ambiguous because it is not clear that whether submitting submitted and selecting selected suggest submitting **from** previously submitted **from** and selecting **from** previously selected **from**, respectively, or simply a submitting and a selecting, respectively?

As per claim 47, in claim element where “immediate navigation” means for “navigating to a URL associated with said selected subset of hypertext links” is unclear in regarding to the role of “immediate” in the navigation means for the function of “navigating to a URL”.

As per claim 10, in claim element where “predermined subset is chosen according to the emphasis of said occurrences within said document” where emphasis is indefinite and not supported by the specification.

Claim Rejections - 35 USC § 101

9. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 56 and 57 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. The claims are directed to “means for” functions, which browse and install links, match string occurrence and navigate to an URL, however, the usefulness of the means for functions are not shown when a link database is browsed, links are installed into submitted document, matched string occurrence is found and hypertext links are navigated.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. Claim 56 is rejected under 35 U.S.C. 102(e) as anticipated by Oren et al. (U.S. Patent 6,539,387, hereafter "Oren").

As per claim 56, Oren teaches "hypertext link installation system" (See Fig. 3 and col. 7, lines 26-44 where hyperlinks are stored in the data structure), comprising:

"a) directory website means for browsing a hierarchical link database" (See Fig. 3 and col. 7, lines 26-44 where a hierarchical data structure contains hyperlinks for browsing to pages); and

"b) link installation means for installing links associated with web pages of said directory website into a submitted document" (See Figs. 12-14, col. 12, lines 53-67 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree and a hypertext node is added by linking into the hierarchical data structure).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 1-18, 20-24, 26-27, 29-30, 35-55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oren et al. (U.S. Patent 6,539,387, hereafter "Oren") in view of Roberge et al. (U.S. Patent 6,154,750, hereafter "Roberge").

As per claim 1, Oren teaches "installing hypertext links in a document" (See Fig. 3 and col. 7, lines 26-44 where hyperlinks are stored in the data structure), comprising: "a) hierarchical database means containing hypertext links" (See Fig. 3 and col. 7, lines 26-44 where a hierarchical data structure contains hyperlinks).

Oren does not explicitly teach wherein "hypertext links is associated with a set of key phrases", although Oren does teach hyperlink is associated with attributes such as ID and type.

However, Roberge teaches that link is associated with a set of key phrases at Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where hypertext link is associated with label, description, type and instance.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine Roberge's teaching with Oren reference by identifying the hypertext under view along with the path of navigation because both references are directed to navigating along hierarchical tree and viewing hypertext file, and the combined teaching would have enabled Oren's user to keep track of hypertext jumps for avoiding getting lost during the jumps and to facilitate search and navigation through a large multi-media database.

Roberge further teaches "b) link selection means for selecting a subset of said hypertext links, thereby forming a selected subset of hypertext links" (See Fig. 3a and col. 4, lines 20-23 where a subset of a hierarchical data structure is selected for navigating along the nodes on the subset data structure).

Oren further teaches the following:

"c) document submission means for submitting said document for hypertext link installation" (See Fig. 12 and col. 12, lines 53-67 where a hypertext node is added by linking into the hierarchical data structure);

"d) string matching means for finding occurrences in said submitted document of key phrases associated with said selected subset of hypertext links" (See Figs. 3-4 and col. 8, lines 55-65 where feature of keyword search for a word or term to a chapter or paragraph of a page is available);

"e) link installation means for inserting into said submitted document hypertext links associated with said occurrences" (See Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree); and

"f) output means for returning a document corresponding to said submitted document including inserted hypertext links" (See Fig. 8 and col. 9, lines 46-53 where text page embedded with hyperlinks is displayed).

As per claim 44, Oren teaches "installing hypertext links in a document" (See Fig. 3 and col. 7, lines 26-44 where hyperlinks are stored in the data structure), comprising: "a) database means containing stored hypertext links" (See Fig. 3 and col. 7, lines 26-44 where a hierarchical data structure contains hyperlinks).

Oren does not explicitly teach wherein "b) educational level assignment means for assigning educational levels to said stored hypertext links", although Oren does teach breaking knowledge into type and categories and associating hyperlink with attributes such as ID and type (See col. 2, lines 52-58 and col. 7, lines 31-35).

However, Roberge further teaches link is associated with a set of key phrases at Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where hypertext link is associated with label, description, type and instance.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine Roberge's teaching with Oren reference by identifying the hypertext under view along with the path of navigation and assigning educational level to the hyperlink because both references are directed to managing medical data and navigating along hierarchical tree and viewing hypertext file where medical knowledge may be broken into categories or types and the types may be further broken into sub-types, and the combined teaching would have enabled Oren's user to accurately categorize hyperlinks in according educational level compatible with the knowledge, to keep track of hypertext jumps for avoiding getting lost during the jumps and to facilitate search and navigation through a large multi-media database.

Roberge further teaches "c) link selection means for selecting a subset of said stored hypertext links, thereby forming a selected subset, wherein said selection may be made in accordance with said educational level assignment" (See Fig. 3a and col. 4, lines 20-23 where a subset of a hierarchical data structure is selected for navigating along the nodes on the subset data structure).

Oren further teaches the following:

"d) document submission means for submitting said document for hypertext link installation" (See Fig. 12 and col. 12, lines 53-67 where a hypertext node is added by linking into the hierarchical data structure);

"e) string matching means for finding occurrences in said submitted document of phrases corresponding to key phrases in said selected subset of hypertext links" (See Figs. 3-4 and col. 8, lines 55-65 where feature of keyword search for a word or term to a chapter or paragraph of a page is available);

"f) link installation means for inserting into said document hypertext links associated with said occurrences" (See Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree); and

"g) output means for returning a document corresponding to said submitted document including hypertext links" (See Fig. 8 and col. 9, lines 46-53 where text page embedded with hyperlinks is displayed).

As per claim 45, Oren teaches "installing hypertext links in a document" (See Fig. 3 and col. 7, lines 26-44 where hyperlinks are stored in the data structure), comprising:

“a) submitting … hypertext links to a link server” (See col. 2, lines 23-38 where a large number of linked pages are browsed); and “b) selecting … hypertext links on said link server” (See col. 2, lines 23-38 where user selects a limited number to browse from a large number of links on a page).

Oren does not explicitly teach selecting and submitting are from “a set of submitted” and ”a set of selected”.

However, Roberge teaches forming a subset of hypertext links (See Fig. 3a and col. 4, lines 20-23 where a subset of a hierarchical data structure is selected for navigating along the nodes on the subset data structure).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant’s invention was made to combine Roberge’s teaching with Oren reference by identifying the hypertext under view along with the path of navigation because both references are directed to navigating along hierarchical tree and viewing hypertext file, and the combined teaching would have enabled Oren’s user to keep track of hypertext jumps for avoiding getting lost during the jumps and to facilitate search and navigation through a large multi-media database.

Oren further teaches the following:

“c) submitting a document to said link server” (See Fig. 12 and col. 12, lines 53-67 where a hypertext node is added by linking into the hierarchical data structure);

“d) searching said document for occurrences of key phrases in a predetermined order” (See Figs. 3-4 and col. 8, lines 55-65 where feature of keyword search for a word or term to a chapter or paragraph of a page is available);

"e) installing links in said document corresponding to said occurrences" (See Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree); and

"f) returning the document containing installed hypertext links as output" (See Fig. 8 and col. 9, lines 46-53 where text page embedded with hyperlinks is displayed).

As per claim 57, Oren teaches "retrieving hypertext links" (See Fig. 3, col. 2, lines 25-38 and col. 7, lines 26-44 where a large number of hypertext links are browsed and hyperlinks are stored in the data structure), comprising:

"a) hierarchical database means containing hypertext links" (See Fig. 3 and col. 7, lines 26-44 where a hierarchical data structure contains hyperlinks).

Oren does not explicitly teach wherein "hypertext links is associated with a set of key phrases", although Oren does teach hyperlink is associated with attributes such as ID and type.

However, Roberge teaches link is associated with a set of key phrases at Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where hypertext link is associated with label, description, type and instance.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine Roberge's teaching with Oren reference by identifying the hypertext under view along with the path of navigation because both references are directed to navigating along hierarchical tree and viewing hypertext file, and the combined teaching would have enabled Oren's user to keep track of hypertext jumps for avoiding getting lost during the jumps and to facilitate search and navigation through a large multi-media database.

Roberge further teaches "b) link selection means for selecting a subset of said hypertext links, thereby forming a selected subset of hypertext links" (See Fig. 3a and col. 4, lines 20-23 where a subset of a hierarchical data structure is selected for navigating along the nodes on the subset data structure).

Oren further teaches the following:

"c) text submission means" (See Fig. 12 and col. 12, lines 53-67 where a hypertext node is added by linking into the hierarchical data structure); and

"d) string matching means for finding occurrences in said submitted document of key phrases associated with said selected subset of hypertext links" (See Figs. 3-4 and col. 8, lines 55-65 where feature of keyword search for a word or term to a chapter or paragraph of a page is available).

The combined teaching of Oren and Roberge references further teaches "e) immediate navigation means for navigating to a URL associated with said selected subset of hypertext links" (See Oren: col. 1, lines 41-51 where web form and hypertext links of a hyperlink system is explained, and Roberge: Figs. 3a, 15 and col. 4, lines 20-23 where a subset of a hierarchical data structure is selected for navigating along the nodes on the subset data structure).

As per claim 2, Roberge further teaches "hierarchical database means comprises nodes corresponding to contexts" (See Fig. 15 where contexts are in the nodes Symptoms, Tests, Labs and Meditations).

As per claim 3, Roberge further teaches "a node corresponding to context contains a subnode corresponding to a key phrase associated with a hypertext link" (See Figs. 5 and 15 where node Cardiac having sub-nodes Symptoms, Tests, Labs and Medications corresponding to descriptions "Symptoms", "Tests", "Lab results" and "Medications", respectively).

As per claim 4, Roberge further teaches "link selection means selects hypertext links on the basis of associated context" (See Figs. 8-9 where subnode Tests is selected on the basis of associated context Tests).

As per claim 5, Roberge further teaches "link selection means further comprises means for specifying the ordering of contexts within said selected subset, and wherein said string matching means searches for said phrases in the specified context order" (See Figs. 5 and 10 where ordered subnodes Tests and Echo within the node of Cardiac and contexts are specified in the ordering of Tests and Echocardiogram).

As per claim 6, the combined teaching of Oren and Roberge references further teaches further teaches "hierarchical database means comprises nodes associated with said set of key phrases" (See Oren: Fig. 3 and col. 7, lines 26-44 where a hierarchical data structure contains hyperlinks, and Roberge: Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where hypertext link is associated with label, description, type and instance).

As per claim 7, the combined teaching of Oren and Roberge references further teaches "a plurality of key phrases may correspond to the same set of associated links, thereby forming a synonym group" (See Oren: col. 12, lines 10-12 where synonyms for chapter names, the nodes, are utilized to enhance searching, and Roberge: Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where hypertext link is associated with label, description, type and instance).

As per claim 8, Oren further teaches "link installation means further comprises means for installing hypertext links in a predermined subset of said occurrences" (See Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into a predetermined subset of the hierarchical tree).

As per claim 9, Oren further teaches "predermined subset is chosen according to the number of said occurrences within a specified portion of said document" (See Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into and within a predetermined subset of the hierarchical tree).

As per claim 10, Oren further teaches "predermined subset is chosen according to the emphasis of said occurrences within said document" (See Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into and within a predetermined subset of the hierarchical tree).

As per claim 11, Oren further teaches "database is searched in a predetermined order" (See Figs. 4-5 and col. 9, lines 11-31 where table of contents for chapters, sub-chapters and pages are hierarchically maintained as indented and searches are conducted through the levels on the hierarchy).

As per claim 12, Oren further teaches "link selection means includes a browsing means for selecting links while browsing said hierarchical database" (See Fig. 8 and col. 11, lines 19-25 where underlined words are links for being clicked to browse).

As per claim 13, Roberge further teaches "link selection means further comprises means for specifying the ordering of key phrases within said selected subset, and wherein said string matching means searches for said key phrases in the specified order" (See Fig. 5 and col. 5, lines 27-41 where nodes are represented in tree hierarchy and nodes are stored as a tuples consisting of identifier, description phrase, type and flag).

As per claim 14, Oren further teaches “matching said occurrences in either plural or singular form” (See Figs. 3-4 and col. 8, lines 55-65 where feature of keyword search for a word or term to a chapter or paragraph of a page is available).

As per claim 15, concerning subject matter of “inhibiting string matches corresponding to prior said occurrences while searching for said key phrases in said specified order”, Examiner takes an official notice that it is well known to an ordinary skilled in the art that inhibiting string matches corresponding to prior said occurrences while searching for said key phrases is a common practice for search engine to efficiently conduct searches, for example, IEEE Xplore® engine uses the ordering of Boolean expression to search and Google™ engine features “without the words” to conduct searches in repeated mode for excluding key phrases or prior occurrences flexibly.

As per claim 16, Roberge further teaches “for associating a plurality of hypertext links with each key phrase in said set of one or more key phrases” (See Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where link is associated with a set of key phrases at hypertext link is associated with label, description, type and instance).

As per claim 17, Oren further teaches “link installation means further comprises means for installing a hypertext link corresponding to said plurality of hypertext links”

(See Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree).

As per claim 18, Oren further teaches "link installation means further comprises choosing means for choosing one of said plurality of hypertext links, thereby producing a chosen hypertext link" (See Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree).

As per claim 20, Oren further teaches "link installation means further comprises means for installing a direct hypertext link corresponding to said chosen hypertext link" (See Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree).

As per claim 21, Oren further teaches "link installation means further comprises means for installing an indirect hypertext link corresponding to said chosen hypertext link" (See Figs. 4, 8, 4, col. 11, lines 10-19 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree and underlined word is an indirect link available for link installation).

As per claim 22, the combined teaching of Oren and Roberge references further teaches "link selection means further comprises means for selection based on a range of educational levels" (See Oren: col. 2, lines 52-58 and col. 7, lines 31-35 where knowledge is broken into type and categories and associating hyperlink with attributes such as ID and type, and Roberge: at Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where hypertext link is associated with label, description, type and instance).

As per claim 23, Roberge further teaches "link selection means further comprises means for selection based on a link property" (See Fig. 5 and col. 5, lines 27-41where link type is available for link selection).

As per claim 24, Roberge further teaches "link property corresponds to a context" (See Fig. 5 and col. 5, lines 27-41where link type is expressed in text string).

As per claim 26, Roberge further teaches "link property corresponds to link ownership" (See Abstract where node is a database entry and each database object belongs to a schema, the owner).

As per claim 27, Roberge further teaches "link property corresponds to resource type" (See Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where hypertext link is associated with type).

As per claim 29, the combined teaching of Oren and Roberge references further teaches "link property corresponds to educational level" (See Oren: col. 2, lines 52-58 and col. 7, lines 31-35 where knowledge is broken into type and categories and associating hyperlink with attributes such as ID and type, and Roberge: at Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where hypertext link is associated with label, description, type and instance).

As per claim 30, the combined teaching of Oren and Roberge references further teaches "submitting a manually assigned educational level as said link property" (See Oren: Fig. 12, col. 12, lines 53-67 col. 2, lines 52-58 and col. 7, lines 31-35 where knowledge is broken into type and categories and associating hyperlink with attributes such as ID and type and where a hypertext node is added by linking into the hierarchical data structure, and Roberge: at Fig. 5, col. 2, lines 56-64 and col. 5, lines 30-41 where hypertext link is associated with label, description, type and instance).

As per claim 35, the combined teaching of Oren and Roberge references further teaches "document may be submitted in html format" (See Oren: Fig. 12 and col. 12, lines 53-67 where a hypertext node is added by linking into the hierarchical data structure, and Roberge: col. 2, lines 56-63 where navigation and display processes are performed on information of a wide range of data types, for examples, text files and HTML documents, etc.).

As per claim 36, the combined teaching of Oren and Roberge references further teaches "document may be returned in html format.

As per claim 37, the combined teaching of Oren and Roberge references further teaches "document may be submitted in latex format" (See Oren: Fig. 12 and col. 12, lines 53-67 where a hypertext node is added by linking into the hierarchical data structure, and Roberge: col. 2, lines 56-63 where navigation and display processes are performed on information of a wide range of data types, for examples, text files and HTML documents, etc.).

As per claim 38, the combined teaching of Oren and Roberge references further teaches "document may be returned in latex format" (See Oren: Fig. 12 and col. 12, lines 53-67 where a hypertext node is added by linking into the hierarchical data structure, and Roberge: col. 2, lines 56-63 where navigation and display processes are performed on information of a wide range of data types, for examples, text files and HTML documents, etc.).

As per claim 39, the combined teaching of Oren and Roberge references further teaches "information transmission means using the internet" (See Roberge: col. 2, lines 56-63 where information resides on internet).

As per claim 40, the combined teaching of Oren and Roberge references further teaches the following:

"a) link submission means for providing submitted hypertext links" (See Oren: Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree); and

"b) link combining means for combining said submitted hypertext links with said hierarchical database" (See Roberge: Abstract where hypertext links are stored in hierarchical database).

As per claim 41, the combined teaching of Oren and Roberge references further teaches "means for combining said submitted hypertext links with said hierarchical database according to a context property specified for each submitted hypertext link, whereby said submitted hypertext links are located within said hierarchical database" (See Oren: Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree, and Roberge: Abstract where hypertext links are stored in hierarchical database).

As per claim 42, the combined teaching of Oren and Roberge references further teaches "a restricted hierarchy means for creating a restricted hierarchical database from said submitted hypertext links" (See Oren: Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree, and Roberge: Abstract where hypertext links are stored in hierarchical database).

As per claim 43, the combined teaching of Oren and Roberge references further teaches "a private hierarchy means for creating a private hierarchical database from said submitted hypertext links" (See Oren: Figs. 12-14 and col. 13, lines 22-40 where nodes are edited and inserted into the hierarchical tree, and Roberge: Abstract where hypertext links are stored in hierarchical database).

As per claim 46, Oren further teaches "submitted hypertext links are tested by the server before accepting them" (See Fig. 11 and col. 13, lines 13-21 where pages in the hierarchy tree are verified and checked for relationship and structure).

As per claim 47, Oren further teaches "predetermined order corresponds to the order of said submitted hypertext links" (See Fig. 11 and col. 13, lines 13-21 where pages in the hierarchy tree are verified and checked for relationship and structure).

As per claim 48, Oren further teaches "selected hypertext links are chosen from said submitted hypertext links" (See Fig. 12 and col. 13, lines 22-31 where pages in the hierarchy tree are placed in according to table contents, hierarchy of sub-chapters and chapters).

As per claim 49, the combined teaching of Oren and Roberge references further teaches "modifying said submitted hypertext links on the link server" (See Fig. 12 and col. 13, lines 22-31 where pages in the hierarchy tree are edited and placed in according to table contents, hierarchy of sub-chapters and chapters, and Roberge: Fig. 15 where internet site is placed and serviced).

As per claim 50, the combined teaching of Oren and Roberge references further teaches “link server are organized hierarchically according to a plurality of assigned contexts for said submitted hypertext links, and wherein said step of selecting a set of selected hypertext links further comprises selecting the set of selected hypertext links based on said assigned contexts” (See Figs. 3a, 12, col. 4, lines 20-23 and col. 13, lines 22-31 where a subset of a hierarchical data structure is selected for navigating along the nodes on the subset data structure and pages in the hierarchy tree are edited and placed in according to table contents, hierarchy of sub-chapters and chapters, and Roberge: Fig. 15 where internet site is placed and serviced).

As per claim 51, the combined teaching of Oren and Roberge references further teaches “submitted hypertext links is associated with at least one link property” (See Roberge: Fig. 5 where nodes are associated with node type, a link property).

As per claim 52, the combined teaching of Oren and Roberge references further teaches “selecting hypertext links is made according to at least one link property” (See Roberge: Figs. 3a, 5 and col. 4, lines 20-23 where a subset of a hierarchical data structure is selected for navigating along the nodes on the subset data structure, and nodes are associated with node type, a link property).

As per claim 53, the combined teaching of Oren and Roberge references further teaches "combining context dictionaries into an aggregate dictionary, and wherein said step of installing links in said document comprises using said aggregate dictionary" (See Oren: Figs. 4, 8, 13 and col. 9, lines 11-31 where pages are placed in according to table of contents and structure of chapters and subchapters, and contexts are aggregated and displayed).

As per claim 54, the combined teaching of Oren and Roberge references further teaches "automatically combining context dictionaries corresponding to lower-level assigned contexts in said hierarchical organization with a context dictionary corresponding to at least one assigned context specified in said step of selecting a set of selected hypertext links based on said assigned contexts" (See Oren: Figs. 4, 8, 13 and col. 9, lines 11-31 where pages are placed in according to table of contents and structure of chapters and subchapters, and contexts are aggregated and displayed).

As per claim 55, the combined teaching of Oren and Roberge references further teaches "automatically combining context dictionaries corresponding to a higher-level assigned context in said hierarchical organization with a context dictionary corresponding to at least one assigned context specified in said step of selecting a set of selected hypertext links based on said assigned contexts" (See Oren: Figs. 4, 8, 13 and col. 9, lines 11-31 where pages are placed in according to table of contents and structure of chapters and subchapters, and contexts are aggregated and displayed).

15. Claim 19, 25, 28 and 31-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oren et al. (U.S. Patent 6,539,387, hereafter "Oren") in view of Roberge et al. (U.S. Patent 6,154,750, hereafter "Roberge"), as applied to claim 1 above, and further in view of Page (U.S. Patent 6,285,999).

As per claims 19, the combined teaching of Roberge and Oren references teaches link installation comprising choosing one of said plurality of hypertext links, thereby producing a chosen hypertext link by editing and inserting nodes into hierarchical tree as previously described in claim 18 rejection.

The combined teaching of the two references does not explicitly teach that choosing one of said plurality of hypertext links on the basis of their ratings.

However, Page teaches link property corresponds to a rating and choosing hypertext links on the basis of ratings (See Abstract where importance of nodes in a linked database is ranked based on documents citing for enhancing the performance of search engine on searching the nodes).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine Page's teaching with Roberge and Oren references by implementing ranking to hyperlinks and choosing hyperlinks on the basis their rankings, and the combined teaching of the references would have been able to facilitate search and navigation through a large multi-media database because the highly cited and ranked document would be of greater interest than one cited less and ranked lower.

As per claim 25, the combined teaching of Roberge and Oren references teaches link is selected based on its property as previously described in claim 18 rejection.

The combined teaching of the two references does not explicitly teach that link property corresponds to a rating.

However, Page teaches link property corresponds to a rating and choosing hypertext links on the basis of ratings (See Abstract where importance of nodes in a linked database is ranked based on documents citing for enhancing the performance of search engine on searching the nodes)

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine Page's teaching with Roberge and Oren references by implementing ranking to hyperlinks and choosing hyperlinks on the basis their rankings, and the combined teaching of the references would have been able to facilitate search and navigation through a large multi-media database because the highly cited and ranked document would be of greater interest than one cited less and ranked lower.

As per claim 28, Page further teaches "link property corresponds to viewer suitability" (See col. 1, line 51 – col. 2, line 19 where document is rated and rank for avoiding author's spamming of the document such that document is more suitably selected).

As per claim 31, the combined teaching of the Roberge and Oren references teaches link property corresponds to educational level as previously described in claim 29 rejection.

The combined teaching of the two references does not explicitly teach that educational level is automatically computed based on link references.

However, Page teaches ranking a node at Fig. 3 and col. 6, lines 12-14.

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine Page's teaching with Roberge and Oren references by implementing ranking to hyperlinks and choosing hyperlinks on the basis their rankings, and the combined teaching of the references would have been able to facilitate search and navigation through a large multi-media database because the highly cited and ranked document would be of greater interest than one cited less and ranked lower.

As per claim 32, the combined teaching of the references further teaches "marking forward references in documents so that said automatic computation of said educational level is not affected" (See Oren: Fig. 8 and col. 11, lines 19-25 where underlined words are links for being clicked to browse forward, and Page: at Fig. 3 and col. 6, lines 12-14 where nodes are ranked).

As per claim 33, the combined teaching of the references further teaches "submitting a manually assigned educational level as said link property (See Oren: See Fig. 12 and col. 12, lines 53-67 where a hypertext node is added by linking into the hierarchical data structure, and Page: at Fig. 3 and col. 6, lines 12-14 where nodes are ranked).

As per claim 34, the combined teaching of the references further teaches "normalizing said automatic computation of said educational level corresponding to said manually assigned levels" (See Page: col. 4, lines 12-15 where links are weighted based on pages and links on each page are normalized).

16. Claims 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oren et al. (U.S. Patent 6,539,387, hereafter "Oren") in view of Roberge et al. (U.S. Patent 6,154,750, hereafter "Roberge"), as applied to claims 57 above, and further in view of Page (U.S. Patent 6,285,999).

As per claim 58, the combined teaching of Roberge and Oren references teaches retrieving hyperlink as previously described in claim 57 rejection.

The combined teaching of the two references does not explicitly teach that link property corresponds to a rating.

However, Page teaches link property corresponds to a rating and choosing hypertext links on the basis of ratings (See Abstract where importance of nodes in a linked database is ranked based on documents citing for enhancing the performance of search engine on searching the nodes)

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention was made to combine Page's teaching with Roberge and Oren references by implementing ranking to hyperlinks and choosing hyperlinks on the basis their rankings, and the combined teaching of the references would have been able to facilitate search and navigation through a large multi-media database because the highly cited and ranked document would be of greater interest than one cited less and ranked lower.

As per claim 59, the combined teaching of Page, Oren and Roberge references further teaches "link selection means further comprises means for combining context dictionaries corresponding to a plurality of said contexts in said hierarchical database means" (See Oren: Figs. 4, 8, 13 and col. 9, lines 11-31 where pages are placed in according to table of contents and structure of chapters and subchapters, and contexts are aggregated and displayed).

Conclusions

17. The prior art made of record

A. U.S. Patent No. 6,539,387

B. U.S. Patent No. 6,154,750

C. U.S. Patent No. 6,285,999

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

D. U.S. Patent No. 6,286,005

E. U.S. Patent No. 6,907,449

Contact information

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's Supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for Page 13 published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Kuen S. Lu

Patent Examiner

April 20, 2006

GRETA ROBINSON
PRIMARY EXAMINER